Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

LIBRARY
RECEIVED
★ FEB 25 1942 ★
U. S. Department of Agriculture

CEREAL COURIER

Official Messenger of the Division of Cereal Crops and Diseases
Bureau of Plant Industry, U. S. Department of Agriculture
(NOT FOR PUBLICATION)

Vol. 34 February 10, 1942 No. 2

Personnel (Jan. 11 - Feb. 10) and Field Station (Jan. 1 - 31)

PERSONNEL ITEMS

Dr. M. T. Jenkins returned to Washington on February 9 from a trip to Tennessee and Louisiana where he conferred with State and Federal officials regarding cooperative corn improvement research. While in Tennessee he attended the Third Southern Corn Improvement Conference held in Memphis from February 4 to 6.

RECENT PUBLICATIONS

Ernst C. Abbe, L. F. Randolph, and John Einset. The Developmental Relationship Between Shoot Apex and Growth Pattern of Leaf Blade in Diploid Maize. Amer. Jour. Bot. 28(9): 778-784, figs. 1-5. November 1941. (Cooperative investigations of the University of Minnesota, New York State (Cornell) College of Agriculture, and the Division of Cereal Crops and Diseases.)

I. M. Atkins and P. B. Dunkle. Barley Production in Texas. Tex. Agr. Expt. Sta. Bul. 605, 35 pp., 9 figs. September 1941. (Cooperation between the Texas Agricultural Experiment Station and the Division of Cereal Crops and Diseases.)

R. H. Bamberg. Cooperative Small Grain Nurseries in Montana. Mont. Agr. Expt. Sta. Mimeo. Leaflet [Unnumb. Pub.] 9 pp. December 1941. (Cooperative investigations of the Montana Agricultural Experiment Station and the Division of Cereal Crops and Diseases.)

[B. B. Bayles.] Report of the Seventh Eastern Wheat Conference, Lafayette, Indiana, June 19-20, 1941. U. S. Dept. Agr., Bur. Plant Indus., Div. Cereal Crops and Dis. [Unnumb. Pub.] 17 pp. [1941.]

J. Allen Clark. Results of Spring Wheat Varieties Grown in Cooperative Plot and Nursery Experiments in the Spring Wheat Region in 1941, with Averages for 1929 to 1941. U. S. Dept. Agr., Bur. Plant Indus., Div. Cereal Crops and Dis. [Unnumb. Pub.] 47 pp. January 31, 1942. [Mimeographed.]

Franklin A. Coffman. The Comparative Winter Hardiness of Oat Varieties. U. S. Dept. Agr. Cir. 622, 35 pp., 4 figs. November 1941.

A. C. Dillman and A. H. Moseman. Comparison of Flax Varieties Grown in Cooperative Nursery Experiments in 1939 and 1940. U. S. Dept. Agr., Bur. Plant Indus., Div. Cereal Crops and Dis. [Unnumb. Pub.] 56 pp. December 1941. [Mimeographed.]

C. C. Fifield, H. C. Fellows, Ray Weaver, J. H. Hayes, Elwood Hoffecker, B. E. Rothgeb. Quality Studies of Wheat Varieties Grown in the Western Region in 1940. U. S. Dept. Agr., Bur. Plant Indus., Div. Cereal Crops and Dis., and Bur. Agr. Marketing Service [Unnumb. Pub.] 25 pp. January 15, 1942. [Mimeographed.]

Alex H. Fitzgerald and Robert C. Eckhardt. 1941 Tennessee Corn Performance Tests. U. S. Dept. Agr., Bur. Plant Indus., Div. Cereal Crops and Dis. [Unnumb. Pub.] 15 pp. January 1, 1942. [Mimeographed.] (Cooperation between the Tennessee Agricultural Experiment Station and the Division of Cereal Crops and Diseases.)

Leonard C. Hoegemeyer. An Association of Root Injury by White Grubs, Phyllophaga Spp., and Lodging of Crossbred Strains of Corn. Amer. Soc. Agron. Jour. 33(12): 1100-1107, figs. 1-4. December 1941. (Contribution No. 323 from the Department of Agronomy, Kansas Agricultural Experiment Station and the Division of Cereal Crops and Diseases.)

C. S. Holton and C. A. Suneson. Varietal Reaction to Bunt in the Western Wheat Region of the United States. Amer. Soc. Agron. Jour. 34(1): 63-71. January 1942. (Cooperative investigations of the Division of Cereal Crops and Diseases and the agricultural experiment stations of Arizona, Idaho, California, Montana, Oregon, Utah, Washington, and West Virginia.)

Harry B. Humphrey. Climate and Plant Diseases. In Climate and Man. U. S. Dept. Agr. Yearbook 1941: 499-502. [November 1941.]

Merle T. Jenkins. Influence of Climate and Weather on Growth of Corn. In Climate and Man. U. S. Dept. Agr. Yearbook 1941: 308-320, figs. 1-5. [November 1941.]

J. H. Kempton and John W. McClane. Hybrid Vigor and Weight of Germs in the Seeds of Maize. Jour. Agr. Res. 64(2): 65-80, fig. 1. January 15, 1942. (G-1243)

H. H. McKinney. Virus Antagonism, Natural Host Resistance, and the Acquired-Immunity Concept with Reference to Plants. (Phytopath. Note) Phytopathology 31(1): 1051-1053. November 1941.

J. H. Martin. Climate and Sorghums. In Climate and Man. U. S. Dept. Agr. Yearbook 1941: 343-347, figs. 1-2. [November 1941.]

S. R. Miles. 1941 Indiana Corn Performance Tests. U. S. Dept. Agr., Bur. Plant Indus., Div. Cereal Crops and Dis. [Unnumb. Pub.] 22 pp. January 1942. [Mimeographed.] (Cooperation between the Purdue University Agricultural Experiment Station and the Division of Cereal Crops and Diseases.)

H. C. Murphy, T. R. Stanton, and F. A. Coffman. Breeding for Disease Resistance in Oats. Amer. Soc. Agron. Jour. 34(1): 72-89, figs. 1-2. January 1942. (Contribution from the Division of Cereal Crops and Diseases and the Iowa Agricultural Experiment station, cooperating.)

K. S. Quisenberry. Report of the Great Plains Uniform Winter-Hardiness Nurseries of 1941. U. S. Dept. Agr., Bur. Plant Indus., Div. Cereal Crops and Dis. [Unnumb. Pub.] 3 pp. February 7, 1942. [Mimeographed.]

L. F. Randolph. An Evaluation of Induced Polyploidy as a Method of Breeding Crop Plants. Amer. Nat. 75(759): 347-363. July-August 1941. (Cooperative investigations of the Division of Cereal Crops and Diseases and the New York State (Cornell) College of Agriculture.)

George M. Reed and T. R. Stanton. Susceptibility of Lee x Victoria Oat Selections to Loose Smut. (Phytopath. Note) Phytopathology 32(1): 100-102. January 1942.

S. C. Salmon. Climate and Small Grains. In Climate and Man. U. S. Dept. Agr. Yearbook 1941:321-342, figs. 1-6. [November 1941.]

E. R. Sears. Amphidiploids in the Seven-Chromosome Triticinae. Mo. Agr. Expt. Sta. Res. Bul. 336, 46 pp., 19 figs. November 1941. (Cooperative investigations between the Missouri Agricultural Experiment Station and the Division of Cereal Crops and Diseases.)

_____. Chromosome Pairing and Fertility in Amphidiploids in the Triticinae. Mo. Agr. Expt. Sta. Res. Bul. 337, 20 pp., 1 fig. December 1941. (Cooperative investigations between the Missouri Agricultural Experiment Station and the Division of Cereal Crops and Diseases.)

G. F. Sprague. Building New Corn Hybrids. Farm Sci. Rptr. 2(4): 7-9. October 1941. (Cooperative investigations between the Iowa Agricultural Experiment Station and the Division of Cereal Crops and Diseases.)

Roderick Sprague. A Blotch and Char-Spot of Western Grasses. Northwest Science 15(4): 81- 85, fig. 1. November 1941. (Cooperative investigations between the Divisions of Cereal Crops and Diseases and Forage Crops and Diseases, and the Oregon and North Dakota Agricultural Experiment Stations.)

_____. Some Leaf Spot Fungi on Western Gramineae. Mycologia 33(6): 655-665. November-December 1941. (Cooperative investigations between the Divisions of Forage Crops and Diseases and Cereal Crops and Diseases, and the Oregon and North Dakota Agricultural Experiment Stations.)

L. J. Stadler. The Comparison of Ultraviolet and X-Ray Effects on Mutation. Cold Spring Harbor Symposia Quant. Biol. 9: 168-177. 1941. (Cooperative investigations of the Division of Cereal Crops and Diseases and the Missouri Agricultural Experiment Station.)

_____ and Fred M. Uber. Genetic Effects of Ultraviolet Radiation in Maize. IV. Comparison of Monochromatic Radiations. Genetics 27(1): 84-118. January 1942. (Cooperative investigations between the Division of Cereal Crops and Diseases and the Missouri Agricultural Experiment Station.)

M. S. Zuber. Relative Efficiency of Incomplete Designs Using Corn Uniformity Trial Data. Amer. Soc. Agron. Jour. 34(1): 30-47, fig. 1. January 1942. (Contribution from the Farm Crops Subsection, Iowa Agricultural Experiment Station, cooperating with the Division of Cereal Crops and Diseases.)

N O T E

Any explanations as to purpose of travel should be omitted from reimbursement vouchers (Form 1012). The character of work performed must of course be shown on the itinerary report accompanying the voucher.

H. S. Smith
Junior Administrative Assistant.

UNITED STATES DEPARTMENT OF AGRICULTURE
OFFICE OF INFORMATION
WASHINGTON

January 20, 1942

MEMORANDUM FOR BUREAU EDITORS

Graphs accompanying manuscripts for publication reach this office in three forms: Final form, on graph paper, on plain paper. The final form is checked in the Section of Illustrations, and the others are completed there.

The final form is achieved by a draftsman who either sketches in the figures on cross-section paper and then traces them onto linen or plain paper, or draws in the figures on blue cross-section paper and then inks in black the final lines. If the figures are submitted on graph paper, in what is intended to be final form, the paper should be ruled in blue, since in the reproduction the blue rules can be filtered out, whereas orange and green lines cannot be.

If only orange- or green-ruled paper is available, the curves or figures should be given as accurately as possible. The lettering, however, may be only roughly or tentatively done, as the graph will have to be retraced onto plain or blue-ruled paper in the Section of Illustrations, at which time the lettering will be done finally.

The construction of graphs or figures on plain paper should be discouraged as far as possible. As it takes more time to draw guide lines and measure the distances, and also to verify them in editorial checking, when graphs are prepared on plain paper than on cross-section paper, it is suggested that hereafter the regular printed cross-section paper be used. The paper should, of course, be of good quality to ensure regularity of the printed lines.

M. C. Merrill,
Chief of Publications.

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry
Washington

Office of Chief of Bureau
B.P.I. Memo. No. 1269

February 5, 1942

To: Heads of Divisions, Bureau of Plant Industry

Subject: New Working Hours

I enclose a copy of a memorandum dated January 27, 1942, to Chiefs of Bureaus from Mr. T. Roy Reid, Director of Personnel. The subject is "New Working Hours".

The suggestions included in this memorandum from Mr. Reid are pertinent. A copy of Mr. Reid's memorandum should be called to the attention of members of your staff, Washington and field, with any supplementary suggestions you might wish to add.

/s/ P. V. Cardon
Acting Chief of Bureau

Enclosure

UNITED STATES DEPARTMENT OF AGRICULTURE
Office of Personnel
Washington, D. C.

January 27, 1942

No. P-220

MEMORANDUM FOR CHIEFS OF BUREAUS AND OFFICES

Subject: New Working Hours

Because of the national emergency and the related increase in the volume of Government work, it has been deemed necessary to increase the official hours of duty required of employees of the Department, beginning January 26, 1942. As previously stated in Personnel Circular No. 108 (Revision I), dated January 20, 1942, employees in the Department will work on the basis of a 44-hour week. The official working hours in Washington, D. C., will be from 9:00 a.m. to 5:30 p.m. Monday through Friday (except in Farm Credit Administration), and from 9:00 a.m. to 1:00 p.m. on Saturday.

This is essentially a transition from a "peacetime" to a "wartime" basis of operations. Although the transition will necessitate certain changes in the personal habits and schedules of employees, I am confident that under the circumstances all employees will cheerfully make the necessary readjustments.

Supervisory officials can make a material contribution toward obtaining the desired result if they will:

(1) Stress the fact that the transition is a necessary part of our wartime effort;

(2) See that there is strict compliance with the new working hours and that application is made for annual leave to cover tardiness or other absence during official hours;

(3) Remind employees in Washington, D. C. (except Farm Credit Administration employees), that the authorized lunch period is limited to one-half hour; and

(4) Caution employees of possible disruption in transportation schedules and suggest that they make appropriate allowances during the period of transition.

/s/ T. Roy Reid
T. Roy Reid
Director of Personnel

FIELD STATION CONDITION AND PROGRESS

(All experiments except those conducted at the Bureau of Plant Industry Research Center, Beltsville, Md., are in cooperation with the State agricultural experiment stations or other agencies.)

LOUISIANA

RICE EXPERIMENT STATION, CROWLEY (Rice Agronomy, J. Mitchell Jenkins) (Feb. 3)

In January the maximum temperature was 74°, the minimum 22°, and the average mean 48° F. In no January in the past 10 years was the mean as low, except in 1940 when it was 40°. Ice formed on 9 days.

The total precipitation of 4.90 inches was 0.35 inch less than the 32-year average for the month. Of the total, 4.10 inches fell on the first day and the remainder was recorded on 8 days.

The excellent weather permitted field operations to proceed with scarcely an interruption, since early in the month. Most of the plowing and floating on the Station was completed. Most farmers completed plowing and dragging, and many have been over their fields with a disc harrow. Preparations indicate that the commercial rice acreage will be greatly increased over that of 1941 and that land will go into rice that ordinarily would have been idle. On January 21, the Station staff took part in a meeting, held in the Acadia Parish Agricultural Building in Crowley, which was called by Director Taggart for the purpose of formulating a program to be used as a guide for rice farming. Those in attendance included farmers from the principal rice-growing parishes, Agricultural Extension Service representatives, and members of the Louisiana Agricultural Experiment Station from Baton Rouge.

ARKANSAS

RICE BRANCH STATION, STUTTGART (Rice and Oat Production and Improvement, C. R. Adair)

The lowest temperatures of the winter occurred during the period from January 5 to January 12. The temperatures ranged from 4° F. on the eighth to 21° F. on the twelfth. The injury to winter oats was very slight during that period. The foliage of early-sown oats was frozen back but very few plants were killed. Considerable acreages of oats were seeded in late October and early November. None of the late-seeded oats that the writer observed on plots or fields were reduced in stand enough to justify reseeding, although the injury was more severe than in oats that were sown earlier. The rainfall during January was 3.31 inches, which was 3.38 inches less than the average.

The writer attended the annual convention of the Association of Southern Agricultural Workers, which was held in Memphis, Tenn., on February 4, 5, and 6. The theme of the program was "Southern Agriculture in a Changing World." This organization is divided into many sections which embrace all phases of agriculture from reports of soils investigations to discussions of "Consumer Interests and Their Relationship to the Defense Program." The writer was at the meeting only on February 4, and attended the meeting of the joint Crops and Soils Sections. The subject was "Crop Yield and Organic Matter." Nine papers were given, most of which dealt with cropping and fertilizer practices in relation to soil fertility and soil conservation. The subject was summarized by a general discussion of soil fertility. The writer feels that these meetings are very helpful in coordinating the agricultural research and extension programs in the South.

KANSAS

AGRICULTURAL EXPERIMENT STATION, MANHATTAN (Cereal Rusts, C. O. Johnston) (Feb. 5)

The year 1941 was the second wettest ever recorded in Kansas. Records going back to 1887 show that only 1915 had a greater total rainfall. Precipitation varied from 24.35 inches for Wallace County in western Kansas to 65.31 inches for Coffey County in eastern Kansas and was above normal in every county in the State. The excess in moisture was principally due to exceedingly heavy rains in October, although distribution of rainfall throughout the crop season was better tha than usual. Thus 1941 was a fine crop year in general but crop losses also were large, due to floods and spoilage caused by inability of farmers to harvest and care for crops at the proper time.

With the exception of the first 10 days, January 1942 was a very mild month at Manhattan. A severe blizzard on December 31 and January 1 was accompanied by the lowest temperatures of the winter. A temperature of -8° F. was recordod on January 2 and 5. However, the storm was accompanied by snow which covered fields to a depth of several inches during the most severe weather. As a consequence, there was little damage to winter wheat by low temperatures. In nursery sowings of winter wheat at Manhattan, much volunteer oats still is alive and winter barley appears to be in good condition.

The mild winter and snow cover during the 10 days of severe weather in January have favored the overwintering of leaf rust of wheat in fair abundance as far north as Manhattan. Examination of field and nursery sowings on February 3 revealed leaf rust present at the rate of about one pustule per square yard. Nearly all uredia found were single infections and most of them were fresh, indicating that they had developed during the mild weather after January 10. No other rusts could be found.

Winter wheat is in good condition in this locality but much of it is short, owing to late sowing. Late in December the writer noted that much of the wheat between Manhattan and Wellington (in the south-central part of the State) was too short to furnish much pasture but was otherwise in excellent condition. Fields in this area have been exceedingly muddy until lately and still are wet in spots.

WASHINGTON

AGRICULTURAL EXPERIMENT STATION, PULLMAN (Wheat and Flax Improvement, O. A. Vogel) (Feb. 4)

The fall-sown wheat in eastern Washington has survived the recent cold spell with no apparent loss of stands. Even the less hardy varieties of wheat, as well as all winter barleys, apparently were sufficiently protected by a light blanket of loose snow to prevent reduction in stand. In the nursery at Pullman the stands of the winter oats and of one new hybrid selection of wheat were reduced considerably. Fall-sown Federation showed considerable leaf injury, but survived with full stands. The lowest unofficial temperature reported was 22° below zero.

Five varieties of wheat that were sown in 6-inch pots and left out of doors were sufficiently exposed to be injured by the low temperatures. The average survival on an injury basis, as well as the average percentage of surviving plants for the five varieties were as follows:

Variety	C. I. No.	Average survival (injury basis)	Average surviving plants
			Percent
Oro x Federation-1	11914	32	72
Oro x Federation-80	11913	33	66
Jenkin	5177	13	23
Athena	11693	1	3
Hybrid 128	4512	10	24

These averages are from ten pots of each variety, each pot containing 7 to 10 plants that were in the early two-leaf stage when the cold weather set in. The two selections of Oro x Federation appear to compare favorably with Hybrid 128 in cold tolerance.

CALIFORNIA

UNIVERSITY FARM, DAVIS (Cereal Agronomy, C. A. Suneson) (Jan. 28)

Early winter rains permitted sowing of most of the experimental material during November. Despite this, growth is very backward. Frosts during December were frequent and day temperatures were also low because of fog. A minimum of 27° F. in early January, accompanied by wind, maintained ice in shaded places for 3 days. This cold snap caused considerable leaf injury to all spring type cereals that were just beginning to tiller. Among barley types deficient in chlorophyll, 85 percent leaf injury occurred in chlorina (genetic symbol f), but chlorina (genetic symbol f_c) was almost as resistant as normal green. The persistent cold apparently has eliminated all rusts on perennial wheats and wild oats. No other diseases have been observed in the field as yet. Even attempts to establish scald on barley from cultures and by moving out diseased greenhouse plants have been unsuccessful.

Precipitation to date totals 11.8 inches, compared with a normal of 9.3 inches.

California agriculture is faced with many immediate adjustments. A large part of the vegetable crop, notably canning tomatoes in this area, has been grown by Japanese. More than 90 percent of the grain has been stored and marketed in bags. Sowing of most of the rice and dusting of many crops for disease and insect control has been done by airplanes--now grounded. Migrant labor, recently so conspicuous, has turned to war work.

917

LIBRARY
RECEIVED
★ JAN 21 1942 ★
U.S. Department of Agriculture

CEREAL COURIER

Official Messenger of the Division of Cereal Crops and Diseases
Bureau of Plant Industry, U. S. Department of Agriculture
(NOT FOR PUBLICATION)

Vol. 34 January 10, 1942 No. 1

Personnel (Dec. 10 - Jan. 10) and Field Station (Dec. 1 - 31)

PERSONNEL ITEMS

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

At the meetings of the American Association for the Advancement of Science and affiliated societies, held in Dallas, Tex., December 29, 1941, to January 2, 1942, the following papers were contributed by members of the staff of the Division:

The Inheritance of Pathogenicity in a Cross Between Physiologic Races 22 and 24 of Melampsora lini. H. H. Flor.

The Relation of Certain Weevils to Root Rot and Basal Stem Rot of Cereals and Grasses. E. W. Hanson and H. E. Milliron.

Transgressive Inheritance of Pathogenicity Factors in Hybrids Between Two Races of Tilletia tritici. C. S. Holton.

Reaction of Varieties and Selection of Oats to Pseudomonas coronafaciens (Elliott) Stapp. Charles H. Kingsolver.

The Influence of Heterozygosis on Fertility and Vigor in Autotetraploid Maize. L. R. Randolph.

Hereditary Susceptibility to X-Ray Injury in Triticum monococcum. Luther Smith.

Cross Inoculations with Pythium arrhenomanes from Cereals and Grasses in the Northern Great Plains. Roderick Sprague and R. E. Atkinson.

Some Experiments on Gene Mutation. L. J. Stadler.

Relative Efficiency of Incomplete Block Designs Using Corn Uniformity Trial Data. M. S. Zuber.

The following members of the Division staff attended the meetings: I. M. Atkins, R. E. Atkinson, H. H. Flor, E. W. Hanson, C. S. Holton, H. B. Humphrey, Charles H. Kingsolver, H. E. Milliron, L. R. Randolph, Luther Smith, L. J. Stadler, E. C. Tullis, and M. S. Zuber.

Dr. Luther Smith from Columbia, Mo., was in Washington January 6 to 10, conferring with members of the Division.

Mr. Elmer G. Heyne arrived in Washington from Manhattan, Kans., on January 7, and will spend about 3 weeks preparing manuscripts.

RECENT PUBLICATIONS

Hurley Fellows. Effect of Certain Environmental Conditions on the Prevalence of Ophiobolus graminis in the Soil. Jour. Agr. Res. 63(12): 715-726, figs. 1-3. December 15, 1941. (G-1230) (Cooperative investigations of the Division of Cereal Crops and Diseases and the Kansas Agricultural Experiment Station.)

Luther Smith. An Inversion, a Reciprocal Translocation, Trisomics, and Tetraploids in Barley. Jour. Agr. Res. 63(12): 741-750, pl. 1, fig. 1. December 15, 1941. (G-1236) (Cooperative investigations between the Division of Cereal Crops and Diseases and the Missouri Agricultural Experiment Station.)

TO THE TECHNICAL FIELD STAFF

Attached to this issue of the Courier is a memorandum from the Chief of the Bureau suggesting the initiating of a policy requiring all employees attending meetings in an official status to submit a written report following the meeting, to be held in the Division files. There follows a sample report covering my own attendance at the meetings of the International Crop Improvement Association in Chicago, December 1-3, 1941. Hereafter, each member of the Division attending such meetings is expected to submit such a report.

M. A. McCall

Head Agronomist in Charge
and
Assistant Chief of Bureau

December 11, 1941

Report of M. A. McCall's attendance at the meetings of the International Crop Improvement Association held in Chicago, Ill., December 1-3, 1941.

Participated in committee discussions on developing standardization of seed certification, and addressed the general session on the relationship of seed certification to the distribution and maintenance of disease-resistant varieties of cereal and other crops.

Contacted the secretaries of 22 State Crop Improvement Associations in attendance at the Association meetings, as well as the national officers of the Association and various other State and seed trade groups interested in crop improvement.

The principal benefit from attendance to this meeting was derived from the opportunity to point out to officials of the State Crop Improvement Associations the serious deficiencies now existing in crop distribution programs from the standpoint of increasing seed stocks and maintaining their identity in the case of new and improved varieties, particularly of legumes and grasses, and also deficiencies in present methods of distributing and maintaining disease-resistant varieties of cereal crops. Distinct progress was made in the development of future plans for the improvement of present practices and standards.

In general, because cereal crops are self-pollinated, the problem of distributing and maintaining adequate seed stocks of improved varieties has been relatively simple. Whether a variety was increased and used commercially has been largely dependent upon its intrinsic merit and values. In the case of cross-pollinated crops like the legumes and grasses, a large part of the effort made on their improvement during the past has been lost because of the lack of an adequate system for increasing and maintaining seed stocks and distributing them to the ultimate grower. With the development of the new breeding programs, it is necessary to meet this situation if the fine work now under way is ultimately to be reflected in American agriculture. The introduction of disease resistance into our cereal varieties and the necessity for adopting certain safeguards in order to prevent the increase of physiologic races which might threaten the effectiveness of our breeding program, also seem to justify giving additional attention to the problem even from the standpoint of the cereal crops. Seed-certifying groups have not been sufficiently conversant with the technical phases of the general problem to realize their responsibilities in the general field. It is felt, however, that through the contacts heretofore established by Dr. Aamodt and his group, and now being followed up on a more definite basis through the Bureau, real progress is being made looking toward the development of a much sounder setup from the standpoint of all crops involved.

REIMBURSEMENT VOUCHERS (FORM 1012)

Descriptions of the work performed should not appear in reimbursement vouchers, but on itinerary reports which accompany vouchers.

In the body (inside) of reimbursement vouchers should appear in chronological order all charges for the period. The hour of departure from headquarters and arrival at and departure from each point where official work is performed should be shown on reimbursement voucher as well as on itinerary report. Total per diem charges for the period should be shown as one item. Allowance for mileage in personal automobile also should be shown as one item.

Example

Following travel in personal automobile.	Subsistence	Other
1941		
11/12 Lv. Ames, Iowa, 7:15 a.m.; arr. Spain, Iowa, 8:20 a.m.		
11/13 Lv. Spain, Iowa, 7:00 a.m.; arr. Bird, Iowa, 10:10 a.m.		
11/17 Lv. Bird, Iowa, 7:00 a.m.; arr. Swan, Iowa, 10:30 a.m.		
11/19 Annual leave beginning 8:00 a.m.		
11/20 Returned to duty 8:00 a.m. at Swan, Iowa.		
11/25 Lv. Swan, Iowa, 7:00 a.m.; arr. Ames, Iowa, 4:00 p.m.		
Per diem allowance - 12-3/4 days at $4.00	$51.00	
Use of personal automobile - 315 miles at 3-1/2 ¢		$11.02
Total		$62.02

H. S. Smith
Junior Administrative Assistant

UNITED STATES DEPARTMENT OF AGRICULTURE

Office of Personnel

Washington, D. C.

December 27, 1941

No. P-208

MEMORANDUM FOR CHIEFS OF BUREAUS AND OFFICES

Subject: Secretary's Memorandum No. 964

Because of Secretary's Memorandum No. 964, dated December 27, 1941, which states that regular hours of duty will be required of employees of the Department of Agriculture both at Washington, D. C., and in the field service on January 1, and February 23, 1942, certain questions relating to leave rights of employees will arise. In anticipation of these, and in order to maintain uniformity in the application of the Secretary's order, you will be guided in making your answers as follows:

In the field service it may be that Federal work cannot be properly performed because of local circumstances on these holidays. In such event, employees on a yearly or monthly basis may be excused from duty on both days without having their absence charged to annual leave, nor their regular pay affected.

Regular per diem or per hour employees including those paid on a "when actually employed" basis will be paid for January 1 and February 23 without working provided they are in a pay status (on duty or on leave with pay) immediately before and after such dates. A "regular" per diem or per hour employee is one who is working regularly for an indefinite period, or for a period of not less than six months, and who has been employed for at least 30 days preceding January 1, or February 23, as the case may be. Employees paid on a per diem basis, other than those who are "regular", will not be entitled to compensation for January 1, or for February 23 if no work is performed. (See 17 Comp. Gen. 298, 19 Comp. Gen. 337 and 19 Comp. Gen. 426)

No leave will be charged for January 1, or for February 23 if such dates fall within a period of leave. Furthermore, no leave will be charged for January 1, or for February 23 if such dates immediately follow a period of leave which began prior to the date of this order. Likewise, no leave will be charged for January 1, or for February 23 if such dates immediately follow a period of leave being taken prior to the effective date of separation or furlough.

Sick leave rules are not affected by the Secretary's order.

/s/ James L. Buckley
Acting Director of Personnel

MEMORANDUM TO FIELD STAFF

In Volume 33, No. 19, of the November 25, 1941, Cereal Courier issue there was explained the terms and conditions under which Preference Rating Orders P-22 and P-43 would be assigned to facilitate delivery of certain equipment, repairs and supplies. The Office of Production Management has now issued Preference Rating Order P-100 -- Repairs, Maintenance and Operating Supplies -- which takes the place of Preference Rating Order P-22. The terms of this new order are essentially the same as those of the old order. Certain exceptions or clarifications are listed below:

The terms "Maintenance," "Repairs," and "Operating Supplies" shall not include:

1. Any Material which is physically incorporated, in whole or in part, into any material which a governmental unit manufactures, distributes, sells, stores, or transports.

2. Any Material that is to be used as fuel.

3. Any nonferrous Material to be used as packaging supplies.

4. Material for the improvement of a Producer's property or equipment through the replacement of Material in the existing installation unless such equipment is beyond economic repair.

5. Material for additions to, or expansions of, such property or equipment.

The endorsement of purchase orders to which Preference Order Rating P-100 is applicable should now be stated as:

Material for Maintenance, Repair, or Operating Supplies--Rating A-10 under Preference Rating Order P-100 with the terms of which I am familiar.

_____
(Name of Producer or Supplier)

_____
(Signature of Designated Official)

H. S. Smith

Junior Administrative Assistant

FIELD STATION CONDITION AND PROGRESS

(All experiments except those conducted at the Arlington Experiment Farm, Arlington, Va., are in cooperation with State agricultural experiment stations or other agencies.)

LOUISIANA

RICE EXPERIMENT STATION, CROWLEY (Rice Agronomy, J. Mitchell Jenkins)(November and December, 1941)

Temperatures in November were about normal. The maximum was 83 degrees, the minimum 31 degrees, and the average mean 56 degrees F. Ice formed on two days.

The total precipitation of 2.38 inches occurred on 9 days, and is 12.87 inches less than the total for November 1940; and 2.28 inches less than the 31-year average for the month of November.

Good weather, November 11 to 20 and 23 to 30, permitted the completion of threshing on the Station by the end of the month. The rice is, in the main, of good quality but yields, in many instances, were less than anticipated.

Temperatures in December were somewhat lower than in December 1940. The maximum was 78 degrees, the minimum 31 degrees, and the average mean 55 degrees F. Ice formed on two days.

The total precipitation of 2.04 inches is 3.81 inches less than the 31-year December average.

The total precipitation of 73.47 inches in 1941 has, in the past 31 years, been exceeded only by the 106.64 inches in 1940. The third highest annual rainfall was in 1923 when 71.52 inches were recorded.

Good weather the latter part of November and in the first ten days of December permitted farmers to complete their threshing operations. In many instances yields were poor. Exceptionally good prices, however, have done much to recompense farmers for their low yields.

Station visitors in November and December included: Guillermo Villegas, Paraguay; Jose Serrano, Ecquador; and Luis Moore, Argentina.

On December 11, a group of approximately 50 students and Professors of the College of Agriculture of the University of Sao Paulo, Brazil, spent the morning at the Station.

OKLAHOMA

AGRICULTURAL EXPERIMENT STATION, STILLWATER (Sorghum and Broomcorn, J. B. Sieglinger) [Dec. 23]

Grain (or seed) yields for the sorghum date-varietal experiments at Woodward, Okla., in 1941 were:

Variety	C.I. number	Yield in bushels 1/ (56 lbs.) per acre		
		June 12 seeding	June 25 seeding	Average of 2 dates
Dwarf milo	332	33.3	36.9	35.1
Finney milo	1089	41.0	45.7	43.4
Migari (Wh. 11-2)	---	49.0	47.1	48.1
Feterita	182	37.9	39.1	38.5
Hegari	750	40.6	39.4	40.0
Early hegari (S.A. No. 281)	---	47.6	49.0	48.3
Chiltex	874	46.1	51.8	48.9
White darso (Wd. 52-29)	---	40.6	41.5	41.0
Yellow darso (Wd. 32-12)	---	39.6	47.4	43.5
Darso	615	51.8	52.4	52.1
Club kafir	901	44.6	42.9	43.8
Sedan Red kafir	1103	40.0	45.5	42.7
Reed kafir	628	45.7	49.0	47.4
Sharon kafir	813	40.6	48.4	44.5
Standard kafir	71	47.1	50.5	48.8
Bishop kafir	814	45.3	53.9	49.6
Sunrise kafir	472	36.8	46.5	41.7
Atlas	899	43.6	52.4	48.0
Sugar drip sorgo	---	35.6	45.3	40.4
Sumac, F.C.I. 1712	---	45.0	60.8	52.9
Leoti Red sorgo	---	37.3	48.2	42.7
Average of 21 varieties		42.2	47.3	44.8

1/ Each yield figure is the average of 2 guarded 1/47th-acre plots.

NORTH DAKOTA

DICKINSON SUBSTATION, DICKINSON (Cereal Agronomy, R. W. Smith) (Dec. 31)

The year 1941 is the 50th in which weather records have been kept at Dickinson. Records were recorded first in town previous to the establishment of the Substation in 1905. The precipitation of 31.10 inches in 1941 was a record, being more than 8 inches above the previous high of 1914, when 22.74 inches of moisture fell, and twice the 50-year average of 15.56 inches. Most of the precipitation, 28.58 inches, fell during the 6 months of the growing season, April to September, inclusive. During this time, August was the only month when the rainfall was below normal but the deficiency was only 0.22 inch below the average. June was the wettest month with a rainfall of 10.08 inches of three times the normal of 3.36 inches. The September rainfall of 5.80 inches greatly interfered with the threshing of a bumper crop, which operation already was delayed by August rainfall.

Heavy rainfall prevailed throughout this part of the State as well as in adjoining regions of other States. As a result bumper crops of cereal and other field crops, were obtained, the general average yield being better than in any previous year except for some crops in 1915.

An excellent growth of all field crops was produced at the Substation but yields were reduced very severely by the hailstorm of July 9. Data were obtained on the relative hail resistance of different varieties and crops and this should be of value in a region subject to hail injury. Of the cereal crops only corn and sorghum seemed to recover from the effects of hail almost completely, although their maturity was retarded by prevailing cloudy and wet weather.

UTAH

AGRICULTURAL EXPERIMENT STATION, LOGAN (Cereal Agronomy, R. W. Woodward) (Jan. 2)

The months of November and December have been practically normal with mean temperatures of 32.1° and 27.3° F., respectively. The mean for the growing season was 43.2. The mean for the entire year was 2° below the average. No excessively low temperatures were recorded during the year, but a minimum of 18° below was recorded the night of January 1. The total precipitation for the calendar year 1941 was 21.45 inches, as compared to a 22-year mean of 16.54 inches. Total precipitation during 1941 was one of the highest on record in this State. As a result of the above average precipitation, winter wheat yielded very well in the fall of 1941, and the prospects for next year are excellent. The precipitation was above normal in every month, except January and September.

An effort is being made to complete the annual report within the next few days.

LIBRARY
RECEIVED
MAR 18 1942
U.S. Department of Agriculture

C E R E A L C O U R I E R

Official Messenger of the Division of Cereal Crops and Diseases
Bureau of Plant Industry, U. S. Department of Agriculture
(NOT FOR PUBLICATION)

Vol. 34 March 10, 1942 No. 3

Personnel (Feb. 11 - Mar. 10) and Field Station (Feb. 1 - 29)

PERSONNEL ITEMS

Dr. H. V. Harlan left Washington March 9 for his annual trip through the barley-producing States to confer with members of the malting trade regarding barley, to take notes on experimental barley plantings, harvest experimental barley material, and to confer with Government and State officials regarding barley.

Dr. M. T. Jenkins left Washington March 7 for Lafayette, Ind., where he will confer with officials of the Department and of State agricultural experiment station regarding the cooperative regional program on corn improvement and on the corn borer research program.

Dr. V. H. Morris was in Washington a week beginning about February 15. He conferred with Department officials regarding the program for evaluating quality in soft red winter wheats for specific purposes.

RECENT PUBLICATIONS

C. Roy Adair, H. M. Beachell, N. E. Jodon, Loren L. Davis, and Jenkin W. Jones. Comparative Yields of Transplanted and Direct Sown Rice. Amer. Soc. Agron. Jour. 34(2): 129-137. February 1942. (Cooperative experiments between the Division of Cereal Crops and Diseases and the Arkansas, California, Louisiana, and Texas Agricultural Experiment Stations.)

I. M. Atkins. Texan, New Smooth Awn Barley, A Variety for Blackland Areas. South. Seedsman 5(1): 18, fig. 1. January 1942. (Cooperative investigations between the Texas Agricultural Experiment Station and the Division of Cereal Crops and Diseases.)

A. L. Clapp, R. W. Jugenheimer, H. D. Hollembeak, and J. H. Lonnquist. Kansas Corn Tests, 1941. Kans. Agr. Expt. Sta. Bul. 299, 47 pp., 2 figs. January 1942. (Cooperative investigations between the Kansas Agricultural Experiment Station and the Division of Cereal Crops and Diseases.)

C. S. Holton and H. A. Rodenhiser. New Physiologic Races of Tilletia tritici and T. levis. Phytopath. 32(2): 117-129, fig. 1. February 1942. (Cooperative investigations of the Division of Cereal Crops and Diseases and the agricultural experiment stations of Idaho, Montana, Oregon, Utah, and Washington.)

Merle T. Jenkins. Report of the Fourth and Fifth Corn Improvement Conferences of the North Central Region. Fourth Conference held at Chicago, Ill., Dec. 4, 1940; Fifth Conference held at Urbana and Peoria, Ill., Sept. 8, 9, and 10, 1941. U. S. Dept. Agr., Bur. Plant Indus., Div. Cereal Crops and Dis. [Unnumb. Pub.] 91 pp. February 18, 1942. [Mimeographed.]

Merritt N. Pope. Rate of Growth of the Embryo of Young Barley Seeds on Excised Culms. (Note) Amer. Soc. Agron. Jour. 34(2): 199-202, fig. 1. February 1942.

Joe L. Robinson and Marcus S. Zuber. Iowa Corn Yield Test 1941. Iowa Agr. Expt. Sta. Bul. P38 (n.s.), 377 pp., 1 fig. February 1942. (Cooperation between the Iowa Corn and Small Grain Growers' Association, the Farm Crops Subsection, Iowa Agricultural Experiment Station, and the Division of Cereal Crops and Diseases.)

H. A. Rodenhiser and C. S. Holton. Variability in Reaction of Wheat Differential Varieties to Physiologic Races of Tilletia levis and T. tritici. Phytopath. 32(2): 158-165. February 1942. (Cooperative investigations between the Division of Cereal Crops and Diseases and the Idaho, Minnesota, Montana, Oregon, Utah, and Washington Agricultural Experiment Stations.)

Roderick Sprague. A Revised Check List of the Parasitic Fungi on Cereals and Other Grasses in Oregon. U. S. Dept. Agr., Bur. Plant Indus. Plant Dis. Rptr. Sup. 134, 36 pp. March 1, 1942. (Cooperative investigations between the Divisions of Cereal Crops and Diseases and Forage Crops and Diseases and the Oregon Agricultural Experiment Station.)

Standardized Plant Names. Ed. 2, pp. [677]. Harrisburg, Pa. 1942. (Section on varietal names and synonyms of Cereal Crops, pp. 97-106, contributed by members of the Bureau of Plant Industry, chiefly of the Division of Cereal Crops and Diseases, U. S. Department of Agriculture, including M. A. McCall, J. H. Martin, B. B. Bayles, J. A. Clark, A. C. Dillman, M. T. Jenkins, J. W. Jones, B. B. Robinson, T. R. Stanton, and G. A. Wiebe.)

SURPLUS PROPERTY AVAILABLE FOR TRANSFER

This Division has available for transfer one (1) Engine, P.B. No. 15095 Briggs and Stratton; 2 H.P., throttle for variable speed. It was purchased second-hand in 1931. Estimated repairs are: carburetor $10.00, contact points $0.50.

Anyone interested in securing the engine should address his request to Miss V. V. Lyon of this Division at once.

H. S. Smith
Junior Administrative Assistant

FIELD STATION CONDITION AND PROGRESS

(All experiments except those conducted at the Bureau of Plant Industry Research Center, Beltsville, Md., are in cooperation with the State agricultural experiment stations or other agencies.)

UTAH

AGRICULTURAL EXPERIMENT STATION, LOGAN (Cereal Agronomy, R. W. Woodward) (Mar. 3)

One of the coldest winters in the past 20 years has been experienced, with 34 days in January and February showing minimums of 0° to 26° below. Snowfall in the valleys of northern Utah was also far above normal. The total precipitation for January was 2.18 inches, while 2.06 inches fell during February. Other Stations in the county show still greater precipitation. Snow measurements show 126 inches at Alta, southeast of Salt Lake City, which indicates a high accumulation of moisture. In the dry-farm areas of northern Utah, as well as near Nephi, winter wheat emerged early in the fall and has had a good snow cover since cold

weather began. There is no frost in the ground at the present so farmers are concerned about possible winter-killing due to smothering.

Everything is in readiness for spring seeding as soon as the cold weather ends, but only two minimum temperatures of zero or above have been recorded since February 12. In adjoining valleys of higher elevation some minimums of 60° to 65° below have been reported. Increased acreages of barley and corn are recommended and predicted for 1942. Already the barley acreage has increased from 35,000 to 100,000 acres since 1935. This year 120,000 acres is the Utah crop goal. Corn acreages have nearly doubled in the past few years, according to surveys made by the various agencies.

CALIFORNIA

UNIVERSITY FARM, DAVIS (Cereal Agronomy, C. A. Suneson) (Feb. 28)

Floods occurred in this section early in February. The south Agronomy field, devoted to an increase of Federation 41 wheat, was under 1 to 5 feet of water when Putah Creek overflowed its banks. The crop was severely damaged. Cereal nurseries and plots were located there in 1938, and plots in 1940. An uncompleted bridge on the new routing of Highway 40, which passes through the Agronomy Farm, was washed out--a $100,000 loss. This will delay opening of this speedway.

Other fields were not flooded, but the effects of soil saturation are quite apparent. Although this Station is on comparatively level land, the greatest and most common sampling errors in plot experiments are the result of slight irregular variations in contour with attendant water damage in the low spots during heavy rains.

Clear, dry frosty weather during the past 2 weeks has permitted considerable field work and surveying. Although rusts appeared to have been eliminated by frequent frosts during January overwintering spores of stem rust have been found recently on volunteer wheat and on the perennial wheat-Agropyron plants. This is the third successive year that the Agropyron crosses have carried stem rust through the winter at Davis. It is obvious that the susceptible strains in this cross should not be commercialized where rust overwinters on the plants. Stem rust on oats was also observed. Both scald and net blotch appeared on barley early in the month.

Barleys have generally made good growth, considering the cold weather. Atsel planted in November has headed. Wheat and oats are unusually backward in growth, however. Most of the new disease-resistant oats in the uniform red-oat nursery are decidedly of a winter type, whereas Kanota is not.

1.9
P6917

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry
Washington

Division of
Cereal Crops and Diseases

April 15, 1942

To: Professional Staff of the Division

From: M. A. McCall, Head Agronomist in Charge and Assistant Chief of Bureau

Subject: Cereal Courier

Because of the need for conserving paper, the Cereal Courier will be discontinued for the duration of the emergency. Mimeographed memoranda will be sent out from time to time to circulate the more urgent information that should be made available to Division personnel. In order that those of us in Washington may be kept informed on crop conditions in the field, we would be glad to receive reports occasionally.

M. A. McCall